

Strategy Research Project

ARMY LOGISTICS TRANSFORMATION: A KEY COMPONENT OF MILITARY STRATEGIC RESPONSIVENESS

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USAWC CLASS OF 2008

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Report Documentation Page			Form Approved OMB No. 0704-0188	
<p>Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.</p>				
1. REPORT DATE 15 MAR 2008	2. REPORT TYPE Strategy Research Project	3. DATES COVERED 00-00-2007 to 00-00-2008		
4. TITLE AND SUBTITLE Army Logistics Transformation: A Key Component of Military Strategic Responsiveness			5a. CONTRACT NUMBER	
			5b. GRANT NUMBER	
			5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) David Gaffney			5d. PROJECT NUMBER	
			5e. TASK NUMBER	
			5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army War College ,122 Forbes Ave.,Carlisle,PA,17013-5220			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSOR/MONITOR'S ACRONYM(S)	
			11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited				
13. SUPPLEMENTARY NOTES				
14. ABSTRACT See attached				
15. SUBJECT TERMS				
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 30
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified		

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**ARMY LOGISTICS TRANSFORMATION: A KEY COMPONENT OF MILITARY
STRATEGIC RESPONSIVENESS**

by

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ABSTRACT

AUTHOR: Colonel David B. Gaffney

TITLE: Army Logistics Transformation: A Key Component of Military Strategic Responsiveness

FORMAT: Strategy Research Project

DATE: 25 March 2008 WORD COUNT: 6,177 PAGES: 30

KEY TERMS: Strategic Responsiveness, Army Logistics Transformation

CLASSIFICATION: Unclassified

History has shown that a nation that lacks strategic responsiveness lessens its strategic influence in the international community and increases its strategic risk of attack. Over eight years ago former Army Chief of Staff (CSA), General Eric Shinseki recognized the potential strategic risk of the nation because of the Army's limited strategic responsiveness. In his 1999 Army vision, he set a course to improve strategic responsiveness through transformation of the U.S. Army. Although many transformational elements were necessary to achieve strategic responsiveness, he believed logistics transformation was a necessary precursor to usher in change for the U.S. Army of the 21st century. The purpose of this paper is to question why Army Logistics Transformation is a Key Component of Military Strategic Responsiveness.

ARMY LOGISTICS TRANSFORMATION: A KEY COMPONENT OF MILITARY STRATEGIC RESPONSIVENESS

Strategic Risk

What strategic risk emerges, when an Army's ability to shape policy, defend national security objectives, or deter attack is reduced? In the early 1990s concern about the Army's strategic risk was exposed during Desert Shield/Desert Storm (DS/DS). In the constantly changing strategic environment and the demand for the deployment of U.S. forces to move further and faster, the nation's strategic lift capabilities were exposed as a concern. The strategic lift challenge was highlighted when CINCCENT General Hoar stated, "Strategic lift in this country is broken right now; the shortage of long range military cargo planes and fast cargo ships is so severe the military would be hard pressed to fight even one war."¹ Likewise, the 1992 National Military Strategy documented the nation's lack of preparation for war:

Our recent wars were not fought by forces put in the structure because we saw the threat in time. For World War II, for Korea, and for Vietnam, we used our neglected pool of General Purpose Forces until we could rebuild a warfighting force. Even in Panama and Desert Storm, we used General Purpose Forces, and in the case of Desert Storm, we also used forces that were brought from Germany where they had been deterring the Red Army.²

So the Army's ability to execute its core competencies of providing prompt, sustained land dominance across the full range of military operations was reduced throughout the 20th century.

What is Strategic Responsiveness?

According to Heluth Von Moltke, historically strategic responsiveness was:

The first task of strategy is the final assembly of the fighting forces, the first deployment of the Army...political, geographic, and national

considerations come into question. A mistake in the original assembly of the Army scarcely be [is] rectified in the entire course of the campaign. If the first task is deployment of the Army, then an Army must have the capability to execute in a timely and orderly manner to conduct its mission. An effective initial deployment is vital for the Army to meet its strategic requirements.³

Today strategic responsiveness is defined as “the ability to establish...credible force, when and where required by the joint forces commander (JFC), to maintain peace, deter conflict, or win war....The Army has to move with a greater velocity and sustained lethality to continue its role as the guarantor of victory.”⁴ But strategic responsiveness is more than just being quick to respond; it is about agility, lethality, versatility, and sustainability. Although all these attributes are important, the Army cannot sustain a lethal force if the force cannot “deploy rapidly and sustain itself without a large logistical footprint...no more Iron Mountains of supply.”⁵ Strategically responsive Army forces are mission-tailored with the right sustainment packages that must provide a delicate balance of just enough and not too much. Our leaders’ failure to address sustainment ultimately places at risk an Army’s ability to project its forces. Moreover, “prompt land force response enhances our nation’s ability to deter conflict and provides a capability to prevent an adversary from achieving his political and military objectives if deterrence fails.”⁶

Strategic Responsiveness and its Historical Impact

Duke Wellington once quoted, “The country must have a large and efficient army, one capable of meeting the enemy abroad, or they must expect to meet him at home.”⁷ Strategic responsiveness historically has played a role in influencing the start and outcome of military campaigns. History validates the need to develop, design, and train strategically responsive forces. However, review of U.S. Army history in key battles

reveals a lack of strategic responsiveness. Although our nation's Army has fought valiantly and won numerous wars and conflicts, its constant "Achilles Heel" is its transition to war. In the Spanish-American War (21 April – 12 August 1898), for example, the Army was severely challenged as it embarked on the Santiago Expedition. The Spanish-American War required the first massive U.S. strategic deployment outside of the U.S. territory. Although successful on the battlefield, the 1898 Dodge Commission documented other challenges of the expedition, "one of the lessons taught by the war is that the country should hereafter be in a better state of preparation for war....Especially...with such supplies, equipment, and ordnance stores...not in general use in the United States and which cannot be rapidly obtained in the open market."⁸ Although casualties were low during the Spanish-American War, the backlash as a result of perceived poor general administration by the War left a major concern in the public's mind about U.S. forces' capability to move and supply large forces in an orderly, tactically sound manner. Unfortunately, many of the general administrative shortcomings identified in the Dodge Commission report would continue to resurface in the future.

During the 20th century in World Wars (WW) I and II, the industrial revolution accelerated the complexity, speed, and logistics of combat operations. For example, during Germany's 1939 attack into Poland, wheeled and tracked vehicles demonstrated how maneuver superior capabilities could influence a battle. The advent of vehicles ushered in the German's land warfare capability of what it called Blitzkrieg or lightning war. The vehicle provided the ability for ground forces to move great distances in less time; thereby, improving a commander's ability to operationally synchronize in time and

space combat formations. As commanders rushed to improve every aspect of the speed of battlefield movement and maneuver it produced an array of unintended logistical consequences. One unintended consequence was the new demand for classes of supply, which included for example fuel, large caliber ammunition, and spare parts. The design and development of wheeled and armored vehicles enhanced land mobility, but it also added a complex requirement of how to strategically and operationally move and supply forces. This new logistical cost meant that a large robust supply-based system was needed to ensure commanders could sustain their operations. This supply-based footprint, unfortunately over time, would become a source of major concern for U.S. Army leadership.

Over the next 40 years following WWII, the U.S. and U.S.S.R. entered a period called the Cold War. The U.S. strategy of forward positioning forces and equipment in Europe and other supporting countries changed the paradigm of strategic responsiveness. The post-1945 Soviet occupation of the East, with Allies occupying the West became the Cold War battleground. To support the build-up on this front, U.S. “troop levels tripled from 1950 to 1953. Every year for nearly four decades, one-quarter of a million troops were billeted in West Germany.”⁹

It was not until 1978, during a worldwide deployment exercise named Nifty Nugget that the major challenge to the Army’s strategic responsiveness surfaced. In summary, the Nifty Nugget exercise findings documented concerns about the value of strategic responsiveness. The findings reported:

A lack of flexibility when multiple transportation modes — air, land, and sea — were required. In addition, various data processing systems could not function together. Unity of command was impossible because no single commander had overall responsibility and authority to coordinate

and direct the use of various available transport capabilities. Analysts computed that if this exercise had been an actual conflict, there would have been 400,000 troop casualties, and thousands of tons of supplies and 200,000 to 500,000 trained combat troops would not have arrived at the conflict scene on time.¹⁰

This report was a major impetus that drove the Department of Defense (DOD) to create one agency to manage transportation lift modes by air, land, and sea. Eight years later in 1986, the DOD created the U.S. Transportation Command (USTRANSCOM) to serve as a strategic lift integrator for the military services.

Strategic responsiveness remained an issue throughout the Cold War as the Army began to support military operations other than war (MOOTW). Although many believed that these interventions were not as taxing as the Cold War, “during the 40 years from 1950 to the collapse of the Soviet Union, the Army conducted 10 notable deployments. Since 1990, in the short span of six years, we have deployed 25 times—an increase in missions by a factor of 16.”¹¹ This new paradigm reflects the significance of land forces in supporting the National Security Strategy of engagement and enlargement. As a relevant instrument of power during diplomacy, the Army’s ability to strategically respond was becoming more and more complex because of formation sizes, equipment types, movement distances, and sustainment tails. During these 25 deployments, strategic responsiveness challenges continually surfaced, especially issues with Army equipment mobility in undeveloped nations. In late 1989 when the Berlin Wall came down and the Cold War officially ended, few strategists anticipated forthcoming strategic changes, especially those in the U.S. Army.

Although Desert Storm was extremely successful, its mission completed in only 100 hours, it revealed key logistics shortfalls that affected the Army’s strategic responsiveness. First, consider the strategic deployment challenge of Army forces; it

took over 200 days to move the necessary forces and their sustainment into Kuwait to fight Saddam Hussein's Iraq forces. Furthermore, the strategic lift challenge of moving only personnel into the Kuwaiti region consumed 111 days during phase I of ground forces operations in Kuwait. The fundamental problems arose from a lack of strategic transportation lift and the way forces were processed into the theater for combat operations. The second set of DS/DS strategic responsiveness issues dealt with supplying forces that were conducting combat operations. Due to supply visibility issues "CENTCOM Commanding General Schwarzkopf required thirty to sixty days of supplies in theater to assure that there was an appropriate level of sustainability. This requirement resulted in needing six months to stage the forces and supplies necessary for the operation."¹² The supply buildup for DS/DS supported 500,000 military personnel and required unloading over 500 ships and 10,000 aircraft in the theater of operation. The amount of time it took to build up and sustain supplies for ground forces in DS/DS left no doubt with Army leaders of the need to reduce the amount of time it took to transition to war.

The Strategic Responsiveness Assessment

In The Art of War Sun Tzu claims that, "he who occupies the field of battle first and awaits his enemy is at ease; he who comes later to the scene and rushes into the fight is weary."¹³ The lessons learned from DS/DS profoundly convinced the Army's leaders that the force was slowly losing its relevance as a strategically responsive asset. The lessons of Grenada (Operation Urgent Fury, 1983), Kuwait (DS/DS, 1990), Somalia (Operation Restore Hope, 1992), Haiti (Operation Uphold Democracy, 1994), Afghanistan (Operation Enduring Freedom, 2001), and Iraq (Operation Iraqi Freedom,

2003) all provided evidence of strategic responsiveness concerns. In each of these Operations, the Army's doctrine, organization, material, equipment, and training were not well-matched for the mission. The lingering effects of a Cold War Army mindset revealed the need for a new form of 21st century thinking about land warfare.

In 1999, the 34th Army Chief of Staff, General Eric Shinseki, attempted a different approach to make the Army a more relevant strategic asset for the nation. His Army experience and expertise led him to this conclusion:

Today, the Army is one-third smaller than the Cold War force, but our operational tempo has increased dramatically. Moreover, the lower intensity but higher frequency operations point up a shortfall in our force structure, one readily apparent when Iraq attacked Kuwait in 1990. At that juncture, our heavy divisions, well suited and forward stationed for a central European war, took time to deploy to Southwest Asia. Twelve years later, we remain hard pressed to deploy these magnificent heavy formations to all of the places that request our help. Conversely, our light forces, the finest light infantry in the world, can deploy quickly but lack the lethality, survivability, and staying power of heavy forces. As a result, there is a "capabilities gap" between our heavy forces that are well equipped for war but difficult to deploy strategically, and our light forces that can respond rapidly but lack staying power against heavy mechanized forces. What we require is greater lethality, survivability, and deployability all across the force. These capabilities will also increase our versatility and agility for full -spectrum operations. Our forces must bridge the gap we have meeting full -spectrum operations — those that require the transition from military operations other than war to warfighting without a loss in momentum.¹⁴

General Shinseki acknowledged that (historically) the Army was not as strategically responsive or well-suited for a broad spectrum of combat operations. For example, in Kosovo and Bosnia the Army lessons learned revealed that our Army equipment was too large and too heavy to effectively operate in constrained terrain and cities. In short, the Army was not structured nor equipped for 21st century warfare. His assessment was that the Army was simply not a strategically responsive force.

The Need for Strategic Responsiveness

The following statement from the Army's Transformation Roadmap highlights the Army's need to improve its strategic responsiveness:

With each passing year, our condition as a force becomes a greater liability. In time, that liability will become an unacceptable risk, a condition that will force us to undertake change on the eve of battle. Taken together, the demands of the strategic environment and the realities of the Army's current condition necessitate profound change. We recognize our future shortcomings and we know that we have real operational deficiencies today. The Army must transform.¹⁵

The Army's desire to transform was not necessarily a new admission, but its theme of strategic responsiveness was new. For example, Army transformation during the Reagan administration in the 1980s focused on building a Cold War operational Army that could strike with lighting accuracy. Forward thinking by leaders in that era developed not only concepts but also capabilities that would serve the Army well in the Cold War, the Gulf War, and Kosovo. General Shinseki understood that it would take this same type of forward thinking to create capabilities that would make the Army strategically responsive for the 21st century.

General Shinseki advocated a strategic transformation that focused on transforming Cold War abilities into 21st century capabilities for strategic response. His transformation vision initiated an innovative, but controversial, plan to make the Army more strategically deployable by changing the Army's formation from a division-centric view to brigade-centric structure. Determining how the Army could become more strategically responsive was not an easy feat. As part of his Army Vision 2010 plan, his strategies called for the recapitalization of the legacy force and the development of both an interim force (Stryker Brigades) and objective force. Throughout his complex strategy, General Shinseki emphasized the critical need to transform and modernize the

Army. His goal of transformation depended largely on developing a balanced light-heavy combat brigade, integrating all of its necessary associated fighting capabilities organic within the brigade. Finally, the transformational synergy came from the CSA's strategic responsive timeline to move and sustain forces. To counter the rapidly emerging and uncertain threats of the 21st century, he pledged "the Army will be capable of putting combat force anywhere in the world in 96 hours after lift-off in a brigade combat team...momentum that generates warfighting division on the ground in 120 hours and five divisions in 30 days."¹⁶ In his well-crafted and lucidly composed strategy, General Shinseki's timeline presented challenges to the Army and DOD in many areas: strategic lift, funding, and, most importantly, logistical capabilities.

The Army Logistics Role in Strategic Responsiveness

The CSA's vision called for a transformation centered on making the Army strategically responsive. Although strategic responsiveness has seven attributes (responsiveness, deployability, agility, versatility, lethality, survivability, and sustainability), one attribute was viewed as the key enabler for Army transformation - sustainability. As Martin Van Creveld once stressed "logistics makes up as much as nine-tenths of the business of war."¹⁷ History shows that an enormously larger tooth-to-tail relationship exists in combat formations. The logistical complexity of "moving and supplying" combat formations at each level of war, strategic, operational, and tactical, is not easy. Since the industrial revolution, the Army has struggled with how to effectively and efficiently conduct 20th century logistics for its forces. This was highlighted in a World War II Army-After Action Report (AAR) that aptly described the relationship of logistics to strategic responsiveness:

The security of the U.S. presents a complex problem in logistic preparedness. How should we plan, and how can we organize for national security? What should be the place of logistics in the organization? What should be the relationship of logistic agencies to the combat arms and to other Government agencies? What is the best internal organization for accomplishing logistic functions? How shall we provide for the continuous research and development of new weapons; for adequate quantities of equipment and sufficient numbers of trained forces to meet sudden attack; for rapid manpower, industrial, and Government mobilization?¹⁸

These perplexing questions demonstrate our post WWII concerns about a new world where logistics must facilitate the “rapid transition and sustainment” of our nation’s power to enable us to respond strategically. The critical part of this physical relationship consists of a logistical tail of readily available supplies and equipment to sustain the commander’s intent.

During WWI, WWII, and up to DS/DS the primary way to sustain forces was through a supply-based logistics system that emphasized large supply points at each level of command. This was supported by the logistics philosophy, “it is better to have too much, than not enough” supplies for a combat formation. Supply-based logistics was a product of the Cold War strategy and the U.S. policy in Europe to confront the potential U.S.S.R. threat. The forward presence of U.S. forces combined with “industrial-age production and distribution methods were applied to military logistics...Brute force, ‘Iron Mountains,’ excessive footprint, and multiple orders were characteristics of the industrial-age supply chain. World War II, the Korean War, and the initial stages of the Vietnam Conflict saw logistics managed as a one-way ‘push’ of

materiel to the theater.”¹⁹ Supply based logistics, or the concept of “Brute Force Logistics,” lasted for some time because of the strategic premise that the Army’s next big battle was in Europe. Unfortunately this reasoning held the development of logistics in abeyance over the next 30 years.

Logistics Transformation Evolution

In 1904, then Secretary of War Elihu Root observed that, “Our trouble will never be in raising soldiers. Our trouble will always be in the limit of possibility in transporting, clothing, arming, feeding, and caring for our soldiers.”²⁰ This message was more than a challenge but a warning to address the “limit of possibility” in our logistics system. This warning unfortunately was more of a prophecy anticipating an unintended consequence of the changing industrial age and modern warfare. The evolution of vehicles, weaponry, and technologies provided greater lethality and maneuver. However, they correspondingly increased the demand for logistics to move and supply armies. This was evident in WWII as Roland G. Ruppenthal stated, “The modern ground army has become shackled to its base, unable to venture far afield because it cannot risk severance of its lines of communications. Despite all of its vehicles, the modern field army’s mobility is actually extremely limited, because its knapsack is relatively small in terms of the days of supply it can carry.”²¹ Although a change in warfare’s tactics and procedures progressed in the 19th century, the supply-based “Brute Force” logistics concepts were still very much the same.

In the 1990s many of the Army logistics challenges were addressed when Joint Vision (JV) 2010 was produced and fielded to the services for implementation. In JV 2010 the Joint Staff Chairman directed the services to undergo significant changes;

this strategy was called a Revolution in Military Affairs (RMA). His purpose was to "develop options for bringing about fundamental change in the capabilities of the armed forces, including new doctrines, operational concepts, and organizational structures."²² JV 2010 focused on four new concepts for achieving full-spectrum dominance for the services: dominant maneuver, precision engagement, full-dimensional protection, and focused logistics to meet the challenges of the 21st century. Although each service produced its own supporting plan, General Reimer outlined his concern about the need for a preparatory revolution to usher in the RMA for the Army Vision 2010.

General Reimer believed, "There will not be a revolution in military affairs unless there is a revolution in military logistics."²³ He recognized that the Army logistics system was a Cold War carry over unsuited for the 21st century. General Reimer also understood that until the Army addressed its logistics challenges, the Army would not attain JV 2010 goals and objectives. His concerns echoed throughout the Army logistics community and were used to start the Army logistics transformation called Revolution in Military Logistics (RML). It consisted of three domains: applied technology and agile acquisitions, force projection, and force sustainment. RML was designed to satisfy the tenets of JV 2010's focused logistics by a revolutionary change from a supply-based force to a distribution-based force. RML was designed to harness a concept of a single Army logistics system that coupled information technology with distribution-based logistics.

Shaping Army Logistics Transformation into Strategic Responsiveness

In 1999 as logisticians were refining the RML transition, the new Army Chief of Staff, Gen Shinseki, brought about a vision challenge. The new challenge faced by

Army logistics leaders was how to meet the current CSA's vision: "enhanced strategic responsiveness requires transforming our logistics concepts, organizations, technology and, most importantly, our mindset."²⁴ The logistics transformation complemented the RML, the transformation focus was now on how the Army logistics transformation could enable strategic responsiveness. According to General Shinseki's vision, strategic responsiveness meant meeting combat deployment timelines. Along the same philosophy as his predecessor, General Shinseki believed strongly that "We cannot transform the Army without a transformation in logistics."²⁵

If logistics was going to be an enabler to meet General Shinseki's stated vision of attaining strategic responsiveness, then logistics transformation was the path to realizing his vision. The senior Army logistian at that time, General John G. Coburn, framed the logistics challenges best:

Achieving this capability depends largely on the success we have at fundamentally changing the **calculus** on how forces are projected and supported. Combat Support (CS) and Combat Service Support (CSS) Transformation represents the Army logistics community's strategy to meet three key challenges underpinning the [CSA's] Vision. These challenges include enhancing deployment, reducing the logistics footprint in the combat zone, and reducing the cost of logistics through improved effectiveness, without jeopardizing readiness or combat capability.²⁶

General Corburn's powerful statement strikes at the heart of what it will take to meet the CSA's vision; his words helped articulate the complexity of the way ahead of improving strategic responsiveness for the Army. The critical transformation challenge for logisticians was to fundamentally change the **calculus** on how forces are moved and supplied.

Building the Logistics Transformation Way Ahead

As stated by multiple Army leaders, they believed the Army's transformation success hinged on an effective logistics transformation. Although the Army had its end—strategic responsiveness—it still needed to describe its goals, challenges, and logistics transformation strategy.

In 2001, the Army DCSLOG, Lieutenant General (LTG) Charles S. Mahan, Jr., was appointed to spearhead the effort to develop a logistics strategy to attain the CSA's vision. He was responsible for the monumental task of creating an Army logistics transformation plan that would make the "Army lighter and faster." The complexity of developing this plan was overshadowed by the need to communicate what needed to get done.

The first step LTG Mahan felt necessary consisted of "a meeting of the Army Logistics Triad comprised of the Army's...top logisticians...to reach consensus on a transformation path."²⁷ The result of his coordinated efforts with other logisticians produced three key transformation goals that focused on making logistics transformation an enabler of strategic responsiveness. The three goals identified were "strategic responsiveness – meet deployment timelines, reduce combat zone CS/CSS footprint and reduce the cost of logistics without reducing warfighting capability or readiness."²⁸ In short, these three goals are best summarized into two themes: **reduce logistics footprint and increase mobility.**

LTG Mahan understood that whatever the goals it was critical that, everyone must fully understand the logistics transformation challenges so they could provide viable solutions. For example, one major challenge regarding decreased footprint was the mindset about eliminating "Iron Mountains" in forward operational theaters. The

Army's concern about 'Iron Mountains" focused preventing another Desert Strom episode and addressing associated supply build-up challenges. LTG Billy K. Solomon, then Commander, Combined Arms Support Command (CASCOM), recognized that to overcome these challenges, the Army must "aggressively pursue sustainability as an essential design parameter in future combat and support systems. Today, fuel, ammunition, and major components account for 90% (in tonnage) of a heavy force's daily support requirements."²⁹ To address this weight concern, CASCOM understood that to reduce logistics footprint, replenishment, and cost, their strategies would need to focus on developing more viable logistics concepts, organizations, and systems.

The Army mobility challenges that affected strategic responsiveness were as a result of strategic lift shortfall concerns. The most significant concern was that the Army does not possess its own strategic lift, but it is the principal strategic lift customer, requiring 90 percent of its movement requirements by sea and 10 percent by air. The CSA's objective force deployment timelines of 96 hours for a BCT, 120 hours for division, and 30 days for a corps was not impossible to meet, but it surely challenged the Defense Transportation System. To gain an appreciation of the Joint lift challenges, LTG Daniel G. Brown, former DCINC USTRANSCOM, used the following template to frame the strategic challenge force:

LTG Brown's Template

Closure (responsiveness) = (Lift requirements: passengers, sustainment and equipment) X (Distance: destination to origin) / (Capabilities: lift and throughput capacity).³⁰

As discussed earlier in the paper, USTRANSCOM would need to move roughly "seven times faster than the Army's deployment to Operations Desert Shield and Storm...the pure 'physics' of the task dictates the Army must have new tools to meet the

challenge.”³¹ The USTRANSCOM realized that a combination of solution sets were needed to address the strategic lift challenge “with only moderate increases in capability expected, the Army’s focus must be on driving down requirements and finding innovative ways that effectively shorten the distance required to move its forces.”³² This USTRANSCOM challenge led the Army to reexamine its mobility philosophy and identify three mobility enhancement factors: size, distance, and speed. The Army would use these factors to improve current systems and develop future concepts, processes, and organizations.

The logistics strategy was a combination of initiatives, concepts, and techniques designed to explain the way ahead. The Deputy Chief of Staff for Logistics (DCSLOG) CS/CSS Charter enabled leaders to craft and codify the Army Strategic Logistics Plan (ASLP) as a tool to synchronize their planning and forge ahead with logistics transformation. The general construct of the ASLP identified key drivers of the strategy, demanded better logistics outcomes, established two strategy tracks, and stimulated the following six initiatives: automation and communications, business process change, organizational redesign, tactical and strategic mobility improvements, and technology insertion. The six initiatives were designed to support needed logistics transformation and modernization issues to meet the CSA’s vision. All of the ASLP’s initiatives supported the Army Transformation goal of building the intermediate and objective forces.

The first element the ASLP identified were the key drivers of the strategy (KDOS). The KDOS consisted of six tenets designed to balance and solidify the ASLP with the Army Transformation Plan. These six tenets focused on themes in the CSA’s

vision and provided guidance to assist in understanding the line-by-line endstate of each tenet.

Next, in the ASLP were the desired outcomes from logistics transformation. The desired outcomes were made up of over 20 objectives or effects that evolved from the KDOS and other ASLP efforts. Some of the key objectives consisted of the following: single national logistics provider, improved strategic mobility for early closure of combat capability, real-time visibility and control of the supply chain, improved RSO&I and port-opening capabilities, improved maintenance procedures through electronic and Interactive Electronic Tech Manuals (IETM), embedded diagnostics, sensors, and on-board prognostics and platform (weapon system) sensors. These initiatives focused on supporting Army concepts, organizations, systems, and equipment to speed up strategic mobility, reduce logistics footprint, and keep costs down.

Third, in the ASLP outline was its two-track approach to integrate many of the aforementioned initiatives into the Army Transformation Strategy. These two tracks were: transforming the process and capabilities based-requirements. These tracks helped to synchronize logistics transformation efforts across the Army's three transformation phasing objectives: Initial Force - Initial Transition Phase (present - December 2001); the Interim Force - Interim Transition Phase (January 2001 - October 2002); and the Objective Force - Objective Transition Phase (November 2002 - 2010).

Finally ASLP elaborated on the two tracks: Track I, **transforming the process** was addressed through and focused on "logistics processes that encompassed modernization initiatives in automation, platforms, business process change, organizations, strategic mobility, and technology insertion."³³ Track II was **capabilities**

based-requirements, and focused on, “the near future, with many of the objectives necessarily completed in time for the introduction of the Objective Force in 2010.”³⁴

The “Key Component” Test – Strategy to Concepts to Capabilities

The RML, CS/CSS Charter, and ASLP all helped to develop the Army logistics transformation strategy. From 1999 to 2003, Army logistics was challenged to transform and respond with a plethora of initiatives and concepts. But did logistics leaders sufficiently transform concepts to material capabilities for the Army to respond strategically to future missions?

The Army’s challenge to fulfill its three logistics goals of: meet deployment timelines, reduce CS/CSS footprint and reduce the cost of logistics was not unproblematic. The ability to produce ideas to address goals was not a problem; however, the production of results was an issue. In 2002, although the Army invested a tremendous amount of energy into its transformation plans, they were also under pressure from the Pentagon to show results. The Army’s logistics roadmaps and other transformation plans were questioned because of the pace of progress. This pressure led the Army to create a Logistics Transformation Task Force (LTTF) to revolutionize Army logistics, define how to measure logistics transformation and integrate findings into on going transformation plans. The intent was to use the LTTF’s input to help maintain logistics transformation momentum. According to Major General Ross Thompson III, LTTF board member, “this time, he hopes the reform plan will lead to real-world changes, rather than become just another study.”³⁵ However, he also understood that, “the task force must garner credibility within the Defense Department,

where some top officials have criticized the service for not doing enough to lighten the force.”³⁶

In March 2003, war with Iraq began and the Army was challenged to fight a major campaign and transform at the same time. Although U.S. forces and its coalition partners swiftly and quickly defeated Iraqi forces, the desired logistics success from transformation still had capability shortfalls. The Army was attempting to implement transformational concepts but was short of key enablers in some areas that impacted the execution of operations. For example, the distribution of material was a challenge according to a 3d Infantry Division unit whose comment was, “just-in-time logistics did not work. The supply system failed to provide engineer Class IX repair parts, critical Class IIIP, and Class IX batteries, in any significant quantity, both before and during operations, up to the occupation of Baghdad.”³⁷

Logistics—moving and supplying Armies—is a part of strategic responsiveness and the success of providing logistics is directly linked to an Army’s capabilities. During Operation Iraqi Freedom (OIF), logisticians performed outstanding but that did not mean they had all the capabilities necessary to sustain a 21st century Army. These concerns led the former Chief of Logistics for the Coalition Forces Land Component Command (CFLCC) to identify and prioritize what he saw as the necessary fixes of the Army logistics system. In 2003, Lieutenant General Claude V. Christianson, then Army G4 (Deputy Chief of Staff, Logistics), outlined in an Army Logistics White Paper titled *Delivering Materiel Readiness to the Army*, four critical capability areas: (1) integrate Army logistics with the military’s joint, satellite-based, network communications system; (2) improve timely, flexible supply delivery to the battlefield; (3) improve logistical

support for forces first entering a theater of operations; and (4) integrate the supply chain to improve communication with commands and distribution of supplies.”³⁸ The Army G4’s White Paper was an attempt to bring focus and prioritization to a transformation cycle that produces strategies and concepts faster than the Army can generate the necessary operational capabilities. One example of a shortfall in strategic capabilities is strategic airlift for Army requirements deploying into a theater of operation. The shortfall of strategic airlift for a logistical strategy like End-to-End distribution means that the limited capabilities reduce the ability to fully execute the concept.

The Way Ahead

There are no easy solutions to the best way to conduct Army logistics transformation. However, the cost of not fixing the problem is too high as we move into the next human revolution, the information age. This being the case, it was Albert Einstein that once said, “We can not solve our problems with the same level of thinking that created them.”³⁹ So, if strategic responsiveness is the **problem**, and logistics transformation is the **means**, then what is the **way ahead**?

First, logistics strategies and concepts must fully nest with joint logistics tenets and focus areas. This is important because as the dominate land service, the Army requires the preponderance of joint logistics capabilities. The Army’s executive agent responsibilities necessitate its synchronization of strategies and concepts in order to ensure that joint capabilities produced will benefit its entire customer population during Joint, Interagency, Intergovernmental, and Multinational (JIIM) operations. A review of Figure 1 shows that over a period of nine years from 1996 to 2004 the Army’s crosswalk

to joint tenets was not always linked. The nesting of Army concepts to joint tenets must improve to create a seamless development of capabilities.

1996–2004 Published Tenets and Focus Areas of Logistics	
1996–1997	
Army Vision 2010	Joint Vision 2010
Anticipatory Logistics and Personnel Support	Joint Theater Logistics Command and Control
Split-Based Operations	Joint Deployment and Rapid Distribution
Sustained Tempo	Information Fusion
Enhanced Throughput Operations	Multinational Logistics
Velocity Management	Joint Health Services Support
Battlefield Distribution System	Agile Infrastructure
Total Asset Visibility	
Objective Supply Capability	
1999–2002	
Revolution in Military Logistics	Joint Vision 2020
Seamless Logistics System	Customer Wait Time
Distribution-Based Logistics	Time Definite Delivery
Total Asset Visibility	Total Asset Visibility
Agile Infrastructure	Web-Based, Shared-Data Environment
Rapid Force Projection	Total Life-Cycle System Management
Maintaining an Adequate Logistics Footprint	Condition-Based Maintenance
	Depot Maintenance Partnerships
	End-to-End Distribution
	Executive Agents
	Enterprise Integration
2004	
Army Transformation Roadmap	Army Logistics White Paper
Logistics Data Network	Connect Army Logisticians
Responsive Distribution System	Modernize Theater Distribution
Robust Modular Force Reception Capability	Improve Force Reception
Integrated Supply Chain	Integrate the Supply Chain

Figure 1.⁴⁰

The requirement to support JIIM means that more funding is necessary to buy capabilities that will allow the Army to “**fully and timely**” transform from a supply-based to distribution-based force enabler.

Next, the Army supply-based sustainment system was a strategic risk which both Generals Reimer and Shinseki acknowledged the necessity of logistics transformation before any successful Army transformation can occur. So, has the “revolution in military logistics” occurred? In their article, “An Army Revolution in Military Logistics,” Dr. David A. Anderson and Major Dale L. Farrand wrote the following:

The Army is not in the midst of a revolution in military logistics. Although the Army has revolutionized specific processes, logistics transformation generally has been characterized by one of three terms: logistics evolution, logistics reaction, or logistics adaptation. Logistics evolution is a gradual process in which something changes into a different and usually more complex or better form by recognizing shortfalls and evolving to overcome them. Logistics reaction is a change in response to immediate and significant requirements, such as the Global War on Terrorism. Finally, logistics adaptation is recognizing better procedures that are being used by sister services or commercial businesses and applying them to Army systems.⁴¹

The coordinated transformation of logistics is extremely challenging because logistics is an enabler to all the Army's warfighting functions (WFF). No WFF can survive without logistics but how does logistics transformation ensure the right capabilities are available for them? The Army must continue to ensure logistics is a part of life cycle management but it must also find timely ways to monitor, measure, integrate, and improve capabilities according to the three terms of logistics transformation. This means that logistics transformation must happen as a "WFF system of systems" approach. Technology is a critical part of this WFF system of systems approach that will focus on fully integrating the supply sensor visibility of soldier and equipment platforms.

Finally, in a post-Cold War world which is becoming more and more globalized, strategic issues of response time, operational space, and strategic influence have become national security issues. The complex relationship of strategic risk and future threats, concern leaders that must make critical decisions in a new volatile, uncertain, complex, and ambiguous environment. General Shinseki's transformation vision challenged DOD to understand the strategic responsiveness risk associated with inadequate strategic lift. Strategic lift is an enabler and critical part of the solution set of how the Army can attain strategic responsiveness. To address this issue, the Army

should establish new deployment timelines based on potential threats and geographical areas of operation. Finally, develop the position of why more strategic lift is necessary and the need to reduce strategic risk in order to attain a higher level of strategic responsiveness.

Closing

Strategic responsiveness was a vital step towards reducing the nation's strategic risk; more importantly, it was a national responsibility. Using strategic responsiveness as a term of reference, General Shinseki led a very complex transformation effort focused on building Army capabilities necessary to fulfill its Title 10 responsibilities. The relentless demand of military commanders to "move faster and strike harder" will require effective and efficient 21st century logistics. It is this demand that causes the evolution of warfare which is why Army logistics is a key component of strategic responsiveness.

Endnotes

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